ACTIVITY 68 NOTES

PHOTOVOLTAIC

Light Voltage

Photovoltaic cells also known as a solar cell

A solar photovoltaic cell absorbs light energy from the sun or other light sources and transforms it directly into electricity.

Light is made up of photons - “packets” of energy

When photons strike a solar cell, they may be

1. Reflected
2. Transmitted
3. Absorbed

Reflected: photons are bounced off an object or a material

Transmitted: photons pass through an object or material

Absorbed: photons are taken in by the object or material

Solar cells are made of semiconducting silicon compounds.

When a photon is absorbed by a photovoltaic cell, the energy of the photon is transferred to an electron in the semiconducting material and converted to electricity.

Two variables affect the amount of electricity produced by the solar cell.

1. Area of the solar cell exposed to the sun.
2. Amount of light, measured by the angle of the light rays hitting the solar cell (intensity)

Series Circuit: A circuit where all the components of the circuit are connected one after another, in a row, to a battery, there is only one path for the electrical energy in the circuit